

Technical Specifications

The sensors are behind a 12 µm thick Mylar® (PET) foil coated with 100 nm aluminum to protect them from light, dust and touch.

Do not touch the Mylar® foil. Contact Dectris support in case of any contamination of the window.

Number of modules	3 x 8 = 24	
Sensor	Cadmium Telluride (CdTe)	
Sensor thickness	1000 µm	
Quantum efficiency	at 20 keV:	>90 %
	at 40 keV	81 %
	at 60 keV	90 %
	at 80 keV	77 %
	at 100 keV	56 %
Readout chip	PILATUS3 with instant retrigger technology	
Pixel size	172 x 172 µm ²	
Module size	83.8 x 33.5 mm ²	
Format	1475 x 1679 = 2'476'525 pixels	
Area	253.7 x 288.8 mm ²	
Intermodule gap	Vertical 17 pixels, horizontal 7 pixel plus 3 pixel between the CdTe tiles in each module	
Dynamic range	20 Bits (1:1'048'573)	
Counter overflow state	1'048'573	
Maximum count rate	1 x 10 ⁷ phts/s/pixel	
Energy range	15 – 80 keV	
Energy resolution	1000 eV (σ @ 25 keV)	
Recommended threshold range	8 – 40 keV	
Readout time	0.95 ms	
Maximum frame rate	250 Hz	
Point-spread function	1 pixel (FWHM)	
Data formats	Raw data, TIF, EDF, CBF	
External trigger/gate	TTL Level (5 V)	
Software interface	Through socket connection; Clients for EPICS, SPEC and stand-alone operation are available	

Detector Dimensions and Connectors

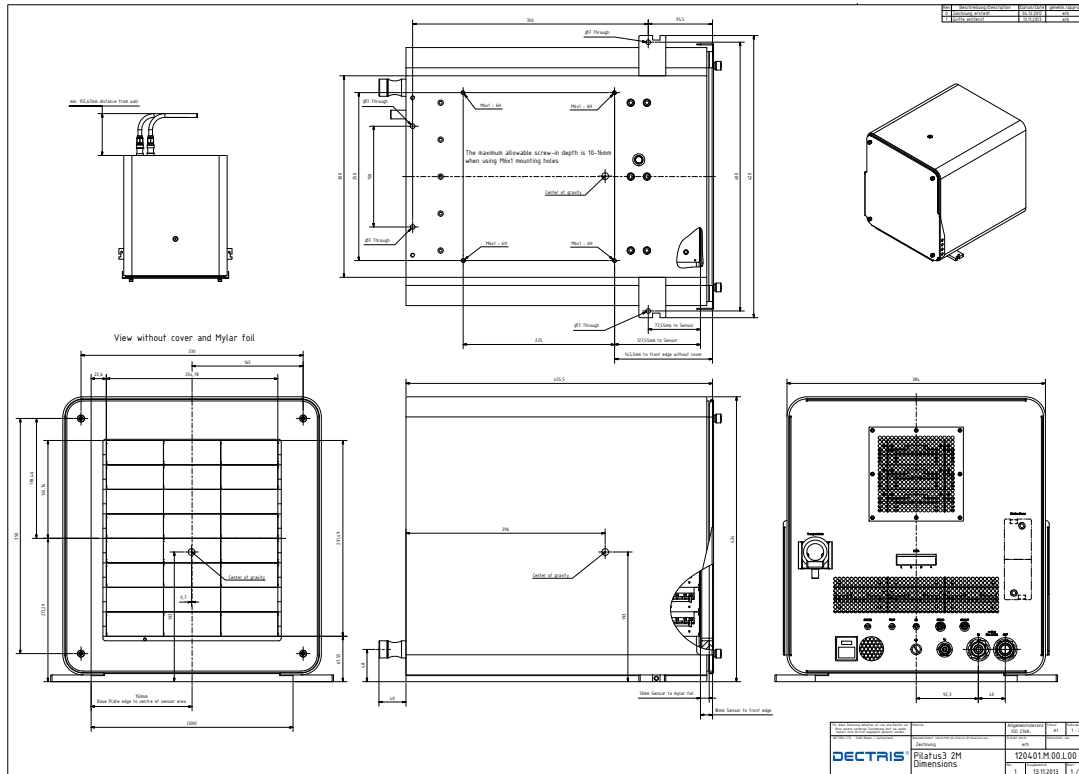


Figure 1: Drawing of the PILATUS3 X CdTe 2M detecto



Figure 2: The PILATUS3 X CdTe 2M detector with the cover in place (front view).



Figure 3: The PILATUS3 X CdTe 2M detector with the cover removed (front view).